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nitude, the following will be the provisional brightness of the new star on the H.P. scale :—

	h		
1901 Feb. 25	11½	mag.	= 1·06
„ 26	11½	„	= 1·64
„ 28	10	„	= 1·64
Mar. 1	9½	„	= 2·44
„ 1	12	„	= 2·64
„ 3	7 10^{m}	„	= 2·41

Judging from its powers of penetrating through cloud, the *Nova* was thought to be comparable with *Capella* on February 23. Its colour also appeared to be the same. With a 2¾-inch refractor the colour was noted as intense bright white on February 25, as yellowish on February 26, and as white—with perhaps a tinge of yellow—on March 3. With the naked eye, aided by spectacles, the colour has always been distinctly yellowish.

Hove: 1901 March 4.

A First Note on the Nova in Perseus. By Professor K. D. Naegamvala, M.A.

On the afternoon of February 25 the following telegram was received from Captain Molesworth, R.E., stationed at Trincomali, in Ceylon :—

"First magnitude star, *Perseus*, right ascension 3·24, declination north 44. Kindly reply whether *Nova* and examine spectrum."

The weather here has been very unfavourable of late, the sky being often overcast, and fleecy clouds present as a rule throughout. A single glance the same evening, however, left no doubt that the star was a *Nova*, fully as bright as β *Geminorum.* It was photographed with a 4-inch portrait lens with one minute's exposure, and a preliminary examination with a Vogel eyepiece spectroscope revealed a bright-lined spectrum. Two spectrograms were also taken the same evening with a prismatic camera composed of a Cooke triple objective of 93-inch focus and a prism of 45°. Owing to an unfortunate maladjustment of the prism the plates came out blank on development.

The next evening (February 26), and on the two following, the *Nova* was carefully observed with Vogel and McClean spectroscopes of varying dispersion applied to the 16-inch guiding

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telescope of the photographic reflector of the observatory, and the following is the summary of the observations. To avoid any bias I purposely refrained from referring to the previous observations of *Nova Aurigæ*, which were not consulted till yesterday.

There is a bright band in red (C), one in yellow (D_3), four in green, and two in blue.

There are four maxima at least in green. The maximum of brightness in the spectrum is in the extreme green, *i.e.* towards the violet.

The last band in blue is broadest, the last of four in green ($H\gamma$) comes next, then the first (of the two bands) in blue ($H\delta$), then C.

The last band in green ($H\gamma$) is brightest, then the last in blue ($H\epsilon$?), then in red ($H\beta$), and then the first in blue ($H\delta$).

Black bands on the violet or more refrangible sides of all the above bright bands except to "$H\epsilon$?" This absence of a black band is most probably due to the great falling off of the continuous spectrum in this region. The black band of $H\delta$ was intensest; next came that of $H\gamma$, and then of $H\beta$. The bright D_3 has also a black companion.

There is a faint broad bright band in the middle of the red portion of the spectrum, resolvable by glimpses into lines. Besides this there is also a very fine bright line in red nearer to $H\beta$, with a companion dark line.

The visible magnitude of the *Nova* on February 26 was about equal to that of β *Geminorum*, on the 27th less than β but greater than α *Geminorum*, while on the 28th it was certainly not greater than α *Geminorum*.

Four spectrograms have been secured during the last three evenings. These show at least sixteen maxima and minima of bright radiations between the region $H\beta$ and K(Ca), each accompanied by a dark companion. I defer for the present their discussion, but a casual comparison with the spectra of *Sirius* and *Capella* taken with the same instrument incontestably testifies to large shifting of the bright bands towards the less refrangible side of the spectrum; the black companions are also in all probability shifted in the opposite direction.

Maharaja Takhtasingji Observatory, Poona:
1901 *March* 1.

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Positions of Nova Persei and 159 *Stars within* 25′ *distance from it. From a Photograph taken at the University Observatory, Oxford.* By F. A. Bellamy, F.R. Met. Soc.

After the receipt of the telegram announcing the discovery of the new star in *Perseus* the weather in Oxford was unfavourable, but on February 25, though very cloudy, there were rifts in the clouds, during which I saw *Nova* at its full brilliancy, and though the star was invisible to the eye most of the time the exposures were made, I was able to secure two plates with seven exposures, between 10^s and 13^m exposure, the star being visible all the time in the $12\frac{1}{4}$-inch refractor, used as a guiding telescope for astrographic work, sometimes as faint as a third or fourth magnitude star.

The plates taken were—

1727. Exposures, 10^s, 2^m, 2^m, 15^s between Oxf. Sid. T. $5^h\,13^m\,7^s$ and $5^h\,21^m\,17^s$.

1728. Exposures, 220^s, 8^m, $13\frac{1}{4}^m$ between Oxf. Sid. T. $6^h\,20^m\,7^s$ and $6^h\,56^m\,42^s$.

On the second plate a trail for ten minutes was also given.

Plate 1728 was measured by Mr. E. A. Gray, with the glass scale micrometer, in one of the instruments used for the astrographic catalogue, first in the direct, then in the reversed position, so as to eliminate personality, and all three exposures were measured for the stars used in determining the plate constants and the *Nova*; but for the other stars given in the subjoined catalogue only the second and third exposures were measured, the majority of the faint stars not being visible with the short exposure, owing to cloud.

The places of all stars which could be found in the Bonn A.G. Catalogue (+40° to +50°) within the area covered by the plate were brought to the epoch 1900·0, and standard coordinates (ξ and η), with reference to the adopted plate centre R.A. $3^h\,25^m$ $+44^\circ\,0'$, were computed by means of the formulæ given in *Monthly Notices*, liv. 11.*

The Oxford measures x, y (reckoned from the *corner* of the réseau, not the centre) were compared with these coordinates, equations formed and solved in the usual way, and the constants were found to be—

a	*b*	*c*	*d*	*e*	*f*
		R.I.			R.I.
+·00031	+·00539	−14·3491	−·00528	+·00031	−14·3797

where $\xi = x\,(1+a) + by + c$, $\eta = dx + (1+e)\,y + f$.

In Table I. are collected these computed R.A.'s and Dec.'s, the corrections deduced from this plate, and the Oxford standard coordinates ξ' and η'. This information may be useful to others.

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* Tables for simplifying the use of these formulæ for 0° to 75° have been prepared and will soon be printed.